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ABSTRACT

A brief literature review and a bibliography comprise this resource for educators interested in improving their students' critical thinking skills. The review lists terms that have been used to describe critical thinking, instructional methods that can be appropriate, and suggested characteristics of a critical thinking program. The 11-item bibliography cites journal articles and Educational Resources Information Center (ERIC) microfiche documents containing background information, teaching techniques, and program descriptions dealing with critical thinking. (DC)

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TEACHING CRITICAL THINKING SKILLS

Prepared By: Gail Lucas
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According to a statewide poll released in June 1983 by the Association of California School Administrators, the public wants schools to put more emphasis on developing students' thinking skills. In a 1982 Gallup poll, a majority of those polled felt that not enough attention was being paid to teaching students how to think. The public wants students to be better equipped to survive in today's fast changing world by learning to use a "thinking process" that will help them make successful life decisions.

The practical mechanics of how to teach critical thinking skills raises many questions among educators. First, critical thinking has many definitions and many terms have been used interchangeably to describe it--problem solving, decision making, and creative, evaluative, divergent, productive, convergent, and logical thinking. Certain terms are associated with specific content areas such as problem solving in mathematics and decision making in the social sciences. Critical thinking can also be an "umbrella" term that comprises all these types of thinking. Teachers and administrators can ease the dilemma by agreeing upon the same definition of what is critical thinking and how it can best suit the needs of their students--be it a gifted, math, social science, or special education class. Since many definitions are cited in the literature, teachers can select or adapt an existing definition to fit their instructional needs.

How can critical thinking be taught and at what grade level should instruction begin? There are a plethora of methods used to teach critical thinking. It can be taught to kindergarteners through adults as a separate skill or integrated into a content area. Methods include the use of discussion, puzzles, games, simulations, case studies, problem-center units, analytical problems, controversial or value laden issues, questioning techniques (Bloom's Taxonomy), and programs designed to teach critial thinking processes. Most educators choose a process-type method where students learn a set of skills for solving problems and making decisions.

No matter what method is selected, a review of the literature suggests than an instructional program should include:

- --a concise definition of critical thinking agreed upon by teachers;
- --carefully structured objectives the student can apply to life outside of school;
- --systematic instruction geared to the mastery of specifically defined skills;
- --instruction conducted over a long period of time (several months to several years);
- --a program designed for use by teachers who represent a wide range of teaching talent and for students of varying ability levels;
- --inservice training should be simple--the program should be learned in a short period of time with followup sessions if needed;
- --a program adaptable to a variety of teaching situations;
- --a program both motivating and enjoyable to the teacher and student;
- --a program which has teacher support and commitment.

The following documents contain background information, practical teaching techniques, and program descriptions for current trends in teaching critical thinking skills. Full copies are available from the SMERC Information Center. Please call (415) 363-5447 for ordering information.

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Education Journal Articles

"Critical Thinking in a K-5 Setting: First the Staff and then the Students." Les Imel and Hildi Kang. Thrust, May-June 1983, pp. 23, 28-29. (3 pages)

An elementary principal's step-by-step description of how his staff implemented a critical thinking curriculum.

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

"The Direct Teaching of Thinking as a Skill." Edward de Bono. Phi Delta Kappan, June 1983, pp. 703-708. (4 pages)

A noted authority describes his methods for teaching "the generalizable skill of thinking."

"Help Students Face Tomorrow: Use Problem-Solving Approaches in Your Classroom Today." Margaret R. DeWald and Sharon A. Wallace. The Clearing House, January 1983, pp. 214-217. (4 pages)

Discusses steps for teaching a problem solving process.

"How to Wedge Critical Thinking into Your School Day's Odd Moments." Kathy Bonnes. G/C/T, May-June 1983, p. 61. (1 page)

A teacher describes her student's favorite critical thinking games.

"On Teaching Thinking Skills in the Elementary and Middle School." Jerry L. Brown. Phi Delta Kappan, June 1983, pp. 709-714. (6 pages)

Describes the "Think About" program, a set of sixty 15 minute videotaped lessons that help children learn to reason. Also includes a helpful annotated list of resources for teachers.

"What Computer-Assisted Instruction Can Offer Toward the Encouragement of Creative Thinking." Jean K. Gallini. Educational Technology, April 1983, pp. 7-11. (5 pages)

Discusses the value of computer assisted instruction for teaching thinking skills.

ERIC Microfiche Documents

Critical Thinking and Instruction: A Review. John Thomas and Beverly Loy Taylor. Philadelphia, PA: Research for Better Schools, Inc., 1975. (ED 177 605: 1 microfiche)

Presents a definition of critical thinking and a synthesis of the literature on critical thinking up to 1975.

The Fourth R: Reasoning. Proceedings of the Conference of the University/Urban Schools National Task Force. Richard M. Bossone. New York, NY: City University of New York Center for Advanced Study in Education, 1982. (ED 226 092: 2 microfiche)

Describes and compares four widely-used programs--Instrumental Enrichment, Structure of the Intellect--Learning Abilities, Strategic Reasoning, and Cognitive Research Trust (CoRT).

Project Impact: Improve Minimal Proficiencies by Activating Critical Thinking. Orange County Department of Education, 1981. (ED 225 945: 1 microfiche)

Describes a critical thinking program designed to improve student achievement on district tests of basic skill competency (grades 7-12).

Teacher's Guide for the Basic Competencies in Reasoning. Vermont State Department of Education, 1979. (ED 170 190: 1 microfiche)

A resource guide for teaching critical thinking skills (grades K-6). Includes a definition of critical thinking and student activities.

Teaching Children How to Think: Synthesis, Interpretation, and Evaluation of Research and Development on Creative Problem Solving. John Feldhusen and others. Lafayette, IN: Purdue, University, 1975. (ED 135 889: 5 microfiche)

A comprehensive guide on how to teach and set up a critical thinking curriculum for grades K-6. Includes reviews of research studies, books, and instructional materials.